

Exhibit A

Guidance for Industry and FDA Staff

Expedited Review of Premarket Submissions for Devices

Document issued on: November 26, 2003

This document supersedes and replaces PMA/510(k) Expedited Review - Guidance for Industry and CDRH Staff (G98-4), issued March 20, 1998.

For questions regarding the use or interpretation of this guidance in the review of PMAs, PDPs and PMRs, please contact Thinh Nguyen at (301) 594-2186 or by email at txn@cdrh.fda.gov.

For questions regarding the use or interpretation of this guidance in the review of 510(k)s, including the Evaluation of Automatic Class III Designation classification actions, please contact Heather Rosecrans at (301) 594-1190 or by email at hsr@cdrh.fda.gov.

For questions regarding the use or interpretation of this guidance in the review of devices regulated by CBER, please contact Sayah Nedjar at (301) 827-3524 or by email at nedjar@cber.fda.gov.



U.S. Department of Health and Human Services
Food and Drug Administration
Center for Devices and Radiological Health

Center for Biologics Evaluation and Research



Contains Nonbinding Recommendations

Preface

Public Comment

Written comments and suggestions may be submitted at any time for Agency consideration to the Division of Dockets Management, Food and Drug Administration, 5630 Fishers Lane, Room 1061, (HFA-305), Rockville, MD, 20852. Alternatively, electronic comments may be submitted to <http://www.fda.gov/dockets/ecomments>. When submitting comments, please refer to Docket No. 98D-0173. Comments may not be acted upon by the Agency until the document is next revised or updated.

Additional Copies

Additional copies are available from the Internet at: <http://www.fda.gov/cdrh/mdufma/108.pdf> or to receive this document via your fax machine, call the CDRH Facts-On-Demand system at 800-899-0381 or 301-827-0111 from a touch-tone telephone. Press 1 to enter the system. At the second voice prompt, press 1 to order a document. Enter the document number (**108**) followed by the pound sign (#). Follow the remaining voice prompts to complete your request.

Additional copies are also available: Office of Communication, Training and Manufacturers Assistance, HFM-40, Center for Biologics Evaluation and Research, Food and Drug Administration, 1401 Rockville Pike, Rockville, MD 20852-1448, Internet: <http://www.fda.gov/cber/guidelines.htm> or Voice information System: 800-835-4709 or 301-827-1800.

Contains Nonbinding Recommendations

Table of Contents

I. Purpose	1
The Least Burdensome Approach.....	1
II. Background	2
A. The History of Expedited Review of Device Premarket Submissions	2
B. Devices Appropriate for Expedited Review.....	2
C. Expedited Review: Its Meaning and Impact	4
D. Review Organizations Subject to this Guidance Document	5
III. PMA Expedited Review Performance Goals; Applicability	5
IV. Requesting Expedited Review.....	6
A. Industry Responsibilities.....	6
B. FDA Responsibilities	7
V. PMA Pre-filing Meetings.....	9
A. Suggested timing for the PMA pre-filing meeting.....	9
B. Requesting a PMA pre-filing meeting	10
C. Suggested content for pre-meeting package.....	10
D. Meeting documentation.....	11
VI. Expedited Review Procedures for FDA	11
VII. Advisory Panel Review	13
VIII. Conclusion	13
Attachment 1 Expedited Original PMA Submissions	14
Attachment 2 Suggested Timeframes for Discussing Expedited Review with FDA	16
Attachment 3 Expedited Review Form.....	17

Contains Nonbinding Recommendations

Guidance for Industry and FDA Staff

Expedited Review of Premarket Submissions for Devices

This guidance represents the Food and Drug Administration's (FDA's) current thinking on this topic. It does not create or confer any rights for or on any person and does not operate to bind FDA or the public. You can use an alternative approach if the approach satisfies the requirements of the applicable statutes and regulations. If you want to discuss an alternative approach, contact the FDA staff responsible for implementing this guidance. If you cannot identify the appropriate FDA staff, call the appropriate number listed on the title page of this guidance.

I. Purpose

The purpose of this document is to (1) develop a common understanding of the statutory criteria for granting expedited review and (2) outline standard procedures that should be followed to achieve an efficient expedited review process. Furthermore, the updated procedures outlined in this document have been developed to permit the agency to meet specific performance goals under the Medical Device User Fee and Modernization Act of 2002 (MDUFMA) for a subset of device submissions eligible for expedited review.¹

FDA's guidance documents, including this guidance, do not establish legally enforceable responsibilities. Instead, guidances describe the agency's current thinking on a topic and should be viewed only as recommendations, unless specific regulatory or statutory requirements are cited. The use of the word *should* in agency guidances means that something is suggested or recommended, but not required.

The Least Burdensome Approach

We believe we should consider the least burdensome approach in all areas of medical device regulation. This guidance reflects our careful review of the relevant scientific and legal requirements and what we believe is the least burdensome way for you to comply with those requirements. However, if you believe that an alternative approach would be less burdensome, please contact us so we can consider your point of view. You may send

¹ Refer to the letter from the Secretary of Health and Human Services to the Committee on Energy and Commerce of the House of Representatives and the Committee on Health, Education, Labor, and Pensions of the Senate (hereafter referred to as the "Goals Letter") dated November 19, 2002, <http://www.fda.gov/cdrh/mdufma/pgoals.html> and referenced in Section 101(3) of MDUFMA.

Contains Nonbinding Recommendations

your written comments to the contact person listed in the preface to this guidance or to the CDRH Ombudsman. Comprehensive information on CDRH's Ombudsman, including ways to contact him, can be found on the Internet at <http://www.fda.gov/cdrh/resolvingdisputes/ombudsman.html>.

II. Background

A. The History of Expedited Review of Device Premarket Submissions

An expedited review process for medical devices was first developed in 1994 and explained in a General Program Memorandum (G94-2) entitled, "PMA/510(k) Expedited Review." That document was revised and issued as a guidance document on March 20, 1998 to reflect the expedited review criteria in Section 515(d)(5) of the Federal Food, Drug, and Cosmetic Act (the act), as modified by Section 202 of the FDA Modernization Act of 1997 (FDAMA). The revised guidance document, known as "PMA/510(k) Expedited Review – Guidance for Industry and CDRH Staff" is superseded and replaced by this guidance document, which reflects the decade of experience from administering an expedited review program for medical devices, as well as the performance goals set forth in the Goals Letter.

Section 515(d)(5) of the act only applies to premarket approval applications (PMAs). However, because of the potential public health importance of devices warranting expedited review status, the agency also has applied the expedited review criteria to all premarket submissions, including devices evaluated under a product development protocol (PDP), the Evaluation of Automatic Class III Designation process (also known as the "*de novo*" or "risk based" classification process),² and premarket notification submissions (510(k)s).

B. Devices Appropriate for Expedited Review

FDA considers a device, or combination product containing a device,³ appropriate for expedited review⁴ if the device or combination product:

1. **is intended to treat or diagnose a life-threatening or irreversibly debilitating disease or condition, and**
2. **addresses an unmet medical need, as demonstrated by one of the following:**

² Refer to Section 513(f)(2) of the act as amended by Section 207 of FDAMA and the guidance document on the Evaluation of Automatic Class III Designation classification process found at <http://www.fda.gov/cdrh/modact/classiii.html>.

³ Combination products are eligible for expedited review under the MDUFMA goals when CDRH or CBER has been designated as the lead Center.

⁴ FDA is required by statute, section 515(d)(5), to review only PMAs meeting certain conditions on an expedited basis. FDA, however, is using these criteria as guidelines for expedited review of PDPs, 510(k)s and de novo classifications.

Contains Nonbinding Recommendations

- a. **The device represents a breakthrough technology that provides a clinically meaningful advantage over existing technology.** Breakthrough technologies should be demonstrated to lead to a clinical improvement in the treatment or diagnosis of the life-threatening or irreversibly debilitating condition; or
- b. **No approved alternative treatment or means of diagnosis exists;** or
- c. **The device offers significant, clinically meaningful advantages over existing approved alternative treatments.** The device should provide for clinically important earlier or more accurate diagnosis or offer important therapeutic advantages in safety and/or effectiveness over existing alternatives. Such advantages may include demonstrated superiority over current treatments for effects on serious outcomes (e.g., morbidity), ability to provide clinical benefit for those patients unable to tolerate the current treatment, or ability to provide clinical benefit without the serious side effects associated with current treatments; or
- d. **The availability of the device is in the best interest of patients.** That is, the device provides a specific public health benefit, or meets the need of a well-defined patient population. This may also apply to a device that was designed or modified to address an unanticipated serious failure occurring in a critical component of an approved device for which there are no alternatives, or for which alternative treatment would entail substantial risk of morbidity for the patient.

Manufacturers who are working with a federal agency in the development of devices to address a national security issue, should provide FDA with a letter from the agency (e.g., Department of Defense, Department of Homeland Security) identifying the specific device or device type and indicating that commercial availability is of particular importance to our national security. The letter should be on official agency letterhead, signed by an individual with authority to make the request, and be provided to FDA at the time that expedited review status is requested.

Please note that while all device submissions granted expedited review status are subject to priority review, there is no assurance that the devices will receive FDA marketing authorization, or actually get to market, in a more timely manner when compared with submissions not granted expedited status. Although FDA is committed to completing its evaluation of such submissions in the most expedient manner possible, incomplete submissions as well as unresolved scientific and regulatory issues can delay, or preclude, FDA clearance or approval.

Likewise, experience has shown that there are numerous obstacles that are not under FDA's control that may further delay market entry, e.g., manufacturing difficulties. In order to reap a benefit from the expedited review process, the commitment on behalf of the submitter to resolving all scientific and regulatory issues should match that of the agency. It will only be through effective communication and a total

Contains Nonbinding Recommendations

commitment to fulfilling all regulatory and scientific requirements that FDA and the submitter can speed market authorization for safe and effective products.

FDA is committed to working interactively with manufacturers of expedited products in order to ensure that the review process is as efficient as possible. As part of the Goals Letter, FDA has committed, among other things, to apply user fees for more hiring, training, and outside consultation. The agency expects to use these additional resources to enhance the scientific expertise available for the review of expedited devices.

C. Expedited Review: Its Meaning and Impact

Granting expedited review status means that a marketing application that is determined to be appropriate for expedited review is placed at the beginning of the appropriate review queue and receives additional review resources, as needed. If multiple applications for the same type of device offering comparable advantage over existing approved alternatives have been granted expedited review, they are reviewed with priority assigned on a first-in-first-reviewed (FIFR) basis. Once one of the devices is granted market authorization, however, the remaining devices under review generally lose their expedited status, but retain their place in the review queue for the current cycle. Any subsequent review cycles are subject to the standard FIFR procedures applicable to non-expedited submissions.

Historically, devices evaluated in accordance with expedited review procedures have not always shown reduced review times when compared to their non-expedited review counterparts. The reasons for this outcome are varied. Many of the devices involve new technology or present complex scientific and regulatory issues, needing more in-depth review that takes more time. Additionally, a lack of interaction between the submitter and FDA staff, a failure of the manufacturing facility to be prepared for inspection, or an incomplete submission may contribute to a longer time to market.

To address the variety of problems that may delay expedited submissions, the Goals Letter that accompanied the authorization of medical device user fees committed the agency to meeting specific performance goals when a PMA submission is filed only when the applicant meets designated conditions. (Refer to Attachment 1). FDA, in accordance with the Goals Letter, tracks expedited applications against the MDUFMA performance goals when the PMA:

- has been the subject of a pre-filing meeting between the applicant and FDA;
- is substantively complete as defined at the pre-filing meeting; and
- identifies manufacturing facilities that are prepared for a good manufacturing practice (GMP) inspection at the time of submission.

Although all expedited PMAs are subject to the same review procedures, only those expedited PMAs meeting the conditions stated in the Goals Letter will be assessed against the MDUFMA performance goals. FDA intends to continue to assess its

Contains Nonbinding Recommendations

review performance related to expedited review PMAs that do not satisfy the conditions of the Goals Letter as part of the overall PMA program goals. Although the Goals Letter did not include expedited review performance goals for other types of marketing applications (e.g., 510(k)s, PDPs, *de novos*), FDA intends to apply priority review to applications meeting the expedited review PMA criteria identified in the statute. We will assess review performance of these applications as a part of each program's goals.

D. Review Organizations Subject to this Guidance Document

There currently are two offices within CDRH with decision-making responsibilities for premarket submissions, the Office of Device Evaluation (ODE) and the Office of In Vitro Diagnostic Device Evaluation and Safety (OIVD). These offices should use this guidance in the review of incoming applications. In addition, this guidance also should be used by other CDRH and FDA organizational components with medical device review responsibilities, including the Center for Biologics Evaluation and Research (CBER).

III. PMA Expedited Review Performance Goals; Applicability

In order to be tracked against the PMA performance goals outlined in Attachment 1, the following conditions described in the Goals Letter should be met:

1. **The applicant should have a pre-filing meeting with FDA** (see "Pre-filing Meetings" below).⁵ During such a meeting, FDA and the applicant should discuss the timeline for submission, the format of the PMA, the level of information necessary to permit a substantive review, pre-approval inspection issues, and issues related to advisory panel review, as appropriate. Other pre-submission meetings during which discussion of the above information took place may also satisfy this condition of the Goals Letter. That is, if FDA and the applicant have thoroughly discussed such information in a previous meeting, FDA may consider that meeting to be the pre-filing meeting and not ask the applicant to have an additional meeting to satisfy this condition of the Goals Letter. If, however, FDA or the applicant identifies new issues (e.g., design changes, data analysis questions, unexpected adverse events) since the applicant previously met with FDA, another meeting should occur before the PMA is submitted.

Note: In addition to the pre-filing meeting, the agency encourages applicants to take advantage of opportunities to communicate with the Center during the development and submission process. These opportunities include pre-IDE

⁵ Teleconferences or other convenient forms of interaction may substitute for face-to-face meetings between the applicant and the agency. Applicants are encouraged to discuss alternatives to face-to-face meetings with the individual review division.

Contains Nonbinding Recommendations

discussions⁶ to discuss the device development plan, including preclinical studies and clinical trial design, if appropriate. Multiple discussions may be appropriate depending on device development. For example, a meeting held prior to IDE submission would be appropriate for discussion of preclinical requirements or the design of the clinical study.

2. **The application should be substantively complete** (i.e., the application fulfills the PMA content requirements described in 21 CFR 814.20, is acceptable for filing,⁷ and addresses any key issues identified during any pre-PMA submission meetings). Meeting minutes should reflect device-specific items identified by the agency as necessary to support filing. FDA may determine that applications that do not contain these items are not adequate for filing.
3. **PMA submissions should contain a complete manufacturing section and include a statement that the manufacturing facility is prepared for a GMP inspection.⁸**

IV. Requesting Expedited Review

The responsibility for identifying devices that are appropriate for expedited review is a responsibility jointly shared by industry and FDA. A primary objective of this guidance document is to promote a common understanding of which device submission may be granted expedited review status to facilitate an early recognition of devices that merit such review. (Refer to Attachment 2 for suggested timeframes for making expedited review determinations early in the device development process.)

A. Industry Responsibilities

Opportunities to identify a device as a candidate for expedited review occur throughout the device development process. Some of the factors described earlier in this guidance document that indicate that a device should be granted expedited review status may be apparent during the early stage of development, while other factors that indicate a device should be granted expedited review status may not be apparent until there has been an actual assessment of the patient outcome. As an example, a device in the early design stage may qualify for expedited review if, for a certain life-threatening disease or condition, there exists no approved alternative treatment (i.e., see 1. and 2.b. in Section II. B. of this guidance). Alternatively, a device further along in the development process that has undergone clinical testing may be eligible

⁶ Pre-IDE meetings may include formal determination and/or agreement meetings established under sections 513(a)(3)(D) and 520(g)(7) of the act, respectively. For information on early collaboration meetings, please refer to <http://www.fda.gov/cdrh/ode/guidance/310.html>.

⁷ For information regarding the FDA filing decision (21 CFR 814.42), please refer to the guidance document at <http://www.fda.gov/cdrh/ode/guidance/297.html>.

⁸ See “Quality System Information for Certain Premarket Application Reviews” at www.fda.gov/cdrh/comp/guidance/1140.pdf for guidance on the submission of manufacturing information for PMAs.

Contains Nonbinding Recommendations

for expedited review based on significant advances in safety and effectiveness by satisfying conditions 1. and 2.c.

Regardless of the device's stage of development, we encourage industry to identify devices that may be appropriate for expedited review in correspondence with the Center as early as possible. The following milestones may be good opportunities to assess a device for eligibility for expedited review and to notify FDA of devices that appear to warrant expedited review status:

- Pre-IDE discussions with FDA, including formal agreement and determination meetings
- IDE meetings where significant findings are presented to the agency
- Pre-market submission meetings, such as those frequently scheduled with review divisions before submitting PMAs, PDPs, and select 510(k)s.

FDA recommends that industry requests for expedited review of a premarket submission be made in writing and accompany any materials submitted in preparation for an interaction with the agency or with the application that is to be expedited. The request for expedited review should cite the relevant expedited review criteria described in this guidance document that have been met and include information sufficient to justify the request. In cases where FDA has granted expedited review status in advance of the submission of a marketing application, the submitter should include a copy of the FDA correspondence with the marketing application.

Once FDA grants expedited review status for a submission, industry responsibilities do not end. If the expedited review program is to have a meaningful benefit, industry should give priority to resolving all scientific and regulatory issues that surface during the review process. This may involve redistributing resources from other activities to resolving pending issues, or by responding to FDA additional information requests in as timely a manner as possible. It will only be through a complete and total commitment by all parties involved that expedited review will result in safe and effective devices getting to market in as short a time as possible.

B. FDA Responsibilities

It is the responsibility of FDA staff to consider whether new devices are appropriate for expedited review, regardless of whether a company has identified its device as a potential candidate for this program.

The following represent opportunities for identifying devices that are eligible for expedited review:

- Pre-IDE discussions with companies, including formal agreement and determination meetings
- IDE meetings where significant findings may be being presented by a sponsor

Contains Nonbinding Recommendations

- Pre-PMA, pre-PDP, and pre-510(k) meetings where scientific and regulatory requirements may be discussed
- The early phase of FDA review of marketing applications (refer to discussion of specific timeframes discussed below).

Timeframes for Agency Determinations

The Division Director responsible for evaluation of the device is authorized to grant expedited review status for a premarket submission, whether requested by the submitter or initiated by FDA. Given the public health importance of this decision, we will attempt to reach a decision on whether to grant expedited review within the following time frames:

- **Pre-Submission Communications** - When expedited review is a consideration during pre-submission communications with companies, review divisions should make a prompt determination regarding device eligibility. Whenever possible, FDA expects the review divisions to make a determination within two weeks of the request for, or discussion of, a particular device's eligibility for expedited review status.
- **510(k)s and de novo classification actions** - The decision to expedite the review should be made within two weeks from the receipt date of the submission.
- **PMAs and PMA Supplements** – The decision to expedite the review should be made as early as possible during the 45-day filing review.⁹ For PMA supplements that are filed upon receipt (e.g., 180-day supplements), the decision should be reached within 30 days of receipt of the submission.

Note: When granting expedited review, the review divisions should consider other pending submissions for the same intended use that may also be appropriate for expedited review. Likewise, the review divisions need to monitor incoming submissions for devices of the same type that may also be appropriate for expedited review status. If more than one pending submission is appropriate for expedited review, both submissions should be granted expedited review status until one of the submissions is granted marketing authorization for that intended use.

Administrative Procedures

After FDA determines that expedited review is appropriate, the division should complete the “*Expedited Review Form*” (Attachment 3) specifying the basis for its determination along with its assessment as to whether the device meets the additional conditions in the Goals Letter and, therefore, should be tracked against the expedited performance goals for qualified expedited review submissions. A

⁹ 21 CFR 814.42(a)

Contains Nonbinding Recommendations

copy of this form, signed by the Division Director, is to be provided to the appropriate Office Director, and the 510(k) or PMA Section of the Program Operations Staff (POS), or in CBER, to the Regulatory Project Management Branch.

The *Expedited Review Form* also includes certain information regarding resource utilization. In completing the form, review divisions should establish:

- **A Review Team** – The division should designate a team leader and review team, as well as identify resources from outside the division that may be needed to appropriately expedite the review.
- **A Tentative Timeline for Review of the Application** – The division should establish a timeline for review. This is particularly critical for PMAs because they are subject to the expedited times outlined in the MDUFMA Goals Letter. Each division should use project management techniques to expedite the applications and monitor timeframes. CBER should use the structure of a Regulatory Project Manager (RPM) and Scientific Lead (SL) to achieve these goals.

In CDRH, the division will prepare and issue a letter, based upon the current boilerplate letter provided by POS, notifying the submitter of the expedited review status. Within CBER, the Office should prepare the letter notifying the submitter of the expedited review status. The notification conveying expedited review status may be incorporated into other outgoing correspondence between the submitter and the agency, e.g., a response to an IDE or a PMA filing letter. A copy of the letter should be included in the administrative file according to established procedures. Issuance of a letter should also prompt an update of the pertinent database to reflect FDA's granting of expedited review status.

V. PMA Pre-filing Meetings

As discussed previously, in order for an expedited PMA to be reviewed in accordance with the enhanced performance goals, the applicant should have a pre-filing meeting with FDA. Below, we offer some suggestions for the timing for the meeting as well as outline procedures and topics for discussion at the pre-filing meeting.

A. Suggested timing for the PMA pre-filing meeting

The proper timing for the PMA pre-filing meeting depends on whether there have been previous pre-submission meetings with FDA and on the types of questions the applicant may have for the agency. If FDA and the applicant have been meeting regularly throughout the clinical trial process and FDA and the applicant have addressed the major issues, it would be appropriate to have the pre-filing meeting closer to the submission of the PMA. If, however, there have not been any prior meetings to discuss the clinical trial or its progress or significant issues have arisen, it may prove more beneficial to have the pre-filing meeting early on during the applicant's PMA preparation rather than waiting until the PMA is almost ready to be

Contains Nonbinding Recommendations

submitted. Similarly, if the applicant anticipates other issues needing FDA input such as changes to the device design or manufacturing process, the applicant should time the meeting to ensure that FDA's advice can be incorporated into the PMA.

B. Requesting a PMA pre-filing meeting

The applicant should contact the appropriate reviewing division or branch by e-mail or fax to request a pre-filing meeting. To make the most efficient use of agency resources, the meeting request should include adequate information for the division to identify the staff necessary to discuss the proposed agenda items. The meeting request should include the following information:

- Product name and application number (if applicable)
- Brief device description
- Proposed indication(s) for use
- A brief statement of the purpose of the meeting (i.e., pre-filing meeting for an expedited review application)
- A preliminary proposed agenda
- A draft list of topics for which the applicant/submitter is seeking agency feedback
- A list of individuals expected to attend representing the applicant or submitter
- The approximate date on which supporting information will be sent to the division/branch for review
- Suggested dates and times for the meeting.

Within 14 days of receipt of the request, the reviewing division/branch should respond to the requestor (via e-mail, fax, or telephone) with suggested dates and times for the meeting.

C. Suggested content for pre-meeting package

As mentioned above, during a pre-filing meeting, FDA and the applicant should discuss the timeline for submission, the format of the PMA, the level of information necessary to permit a substantive review, pre-approval inspection issues, and issues related to advisory panel review, as appropriate. To facilitate discussion at the pre-filing meeting, the pre-meeting package should be organized according to the proposed agenda. The requestor should provide hard copies of the package for each FDA participant. Please consult the lead reviewer or administrative project manager (if appropriate) for the appropriate number of copies.

If FDA and the applicant have had previous pre-submission meetings, the content of the pre-filing meeting package may vary. However, the package generally should include the following information:

- preclinical testing summary (if appropriate)
- clinical data summary (including any data collected from outside the US either in a clinical trial or as a part of marketing)

Contains Nonbinding Recommendations

- proposed timeline for submission, taking into consideration the need for a complete manufacturing section and GMP-ready facilities for PMA products to qualify for expedited review¹⁰
- special issues (e.g., statistical questions, new data analysis proposal, etc.) that the firm would like to discuss with FDA or that should be resolved before the PMA is submitted.

The submission of a comprehensive pre-meeting package, with sufficient time to enable FDA staff to adequately review the information, is critical to achieving a productive meeting. In CDRH, an applicant or submitter should submit the pre-meeting package *no less than 2 weeks prior to the meeting date*. In CBER, the pre-meeting package should be submitted *no less than 4 weeks prior to the meeting date*.

D. Meeting documentation

A member of the FDA review team (e.g., the team leader, project manager) should prepare minutes of the meeting, incorporating the applicant's notes as appropriate. Meeting minutes should reflect those items discussed at the meeting that have been identified as necessary for the application/submission to be considered complete for substantive review. The meeting minutes should also document the understanding of both FDA and the PMA applicant that a PMA missing one or more of the specific items may not be filed. If the applicant identifies areas of dispute, these concerns should be raised with the team leader as quickly as possible. Further discussion to resolve these differences may be necessary.

VI. Expedited Review Procedures for FDA

The review division, along with all other CDRH components that may be participating, incur specific responsibilities upon granting expedited review. The following areas warrant special consideration:

- **Resource Management** –The director of the reviewing division should ensure that the application is reviewed in the most efficient manner, tracked as an expedited review and, as appropriate, completed within the time frames outlined in the MDUFMA Goals Letter. Implementation of this policy may have an impact on other review work of the division. Additional resources will likely be necessary for review of the marketing applications granted expedited review. The following should be considered, when appropriate, to accommodate the expedited review process:
 - assignment of a team leader/project manager to manage the administrative activities (such as arranging internal and external meetings and teleconferences, taking meeting minutes, etc.);
 - shift in the workload within the affected reviewing division;

¹⁰ Refer to section 515(d)(5) of the act.

Contains Nonbinding Recommendations

- scientific experts from outside the Center and/or the agency may need to be consulted to facilitate review of an expedited application;
- scientists from elsewhere in CDRH may be needed to provide support in areas where the standard review queue is affected by the workload shift; and
- **Monitoring** - On a quarterly basis, the Office of the Director should review the progress of submissions granted expedited review status. The purpose of this review will be to provide feedback to the review divisions and to offer suggestions for any difficulties that they may be encountering.
- **Withdrawal of expedited status** - If an application or submission that initially qualified for expedited review status no longer does, e.g., if an alternative device is approved or cleared, the agency generally should withdraw the applicant's or submitter's expedited review status.¹¹ To optimize the use of resources, the position of a submission losing expedited review status in the review queue should remain the same for the current cycle. The Division Director should issue a letter to the submitter stating that the submission is no longer subject to expedited review. A copy of the letter should be included in the administrative file of the submission. Additionally, the Office should adjust its database to reflect the change in status to ensure that any assessment of the expedited review program does not inappropriately reflect our review performance for submissions that have lost expedited status.
- **Public disclosure** - The fact that FDA has determined a device is eligible for expedited procedures generally will not be disclosed to the public by FDA until the time that marketing authorization has been granted or until the materials are made available in connection with advisory panel meetings for those applications or submissions undergoing panel review.¹² Although FDA generally does not comment on the status of pending applications, the agency may release information if it becomes necessary to correct misleading statements made by the applicant.

At the time of approval or clearance, a publicly disclosable paragraph may be provided to appropriate media outlets (through FDA's Press Office) and FDA information sources (CDRH web page, DSMICA, etc.) depending on the significance of the approval or clearance. FDA may make public sufficient

¹¹ As discussed previously, there may be cases in which a manufacturer is working with a federal agency to develop a device to address a national security issue. In this situation, and there may be others, clearance/approval of the first device would not necessarily affect the expedited status of subsequent applications. FDA would need to determine if the factors warranting expedited review status still apply to the other products.

¹² See <http://www.fda.gov/cdrh/ode/guidance/1341.html> for information about the public availability of the advisory panel materials.

Contains Nonbinding Recommendations

information to permit interested parties to monitor the agency's implementation of the expedited review program.¹³

VII. Advisory Panel Review

FDA takes most PMAs that are granted expedited review status to an advisory panel for review. The respective review division should make the decision whether a PMA will go to an advisory panel, in consultation with the sponsor, at the time of the filing decision. While most 510(k)s are not taken to panel, the review division should make the decision whether an expedited 510(k) submission will go to an advisory panel for review, in consultation with the sponsor, at the time that the expedited review is granted – usually within two weeks of receipt of the submission. It is the responsibility of the Director of the reviewing division to ensure that the decision to bring the application or submission to an advisory panel is made within the appropriate timeframe. The review team and the respective advisory panel Executive Secretary should be involved in this process. Information about the procedures for advisory panel review is available at <http://www.fda.gov/cdrh/modact/amendpan.pdf>.

VIII. Conclusion

Proper application of the principles and procedures outlined in this guidance document can promote public health by speeding the development of valuable medical device technology. FDA expects the combined commitment of its own staff and industry stakeholders to resolving all scientific and regulatory issues will enable the agency to meet its performance goals for rendering sound scientific decisions on expedited products in an efficient and timely manner.

¹³ Any disclosures will be made in accordance with 21 CFR Part 20 and any other applicable laws protecting private, confidential commercial information, and trade secrets.

Contains Nonbinding Recommendations

Attachment 1 Expedited Original PMA Submissions

The following performance goals apply to PMA submissions where (see also Table 1):

- FDA has granted the application expedited status;
- The applicant has requested and attended a pre-filing review meeting with FDA;
- The applicant's manufacturing facilities are prepared for inspection upon submission of the application; and
- The application is substantively complete, as defined at the pre-filing review meeting.

Table 1. When do PMA Performance Goals Apply?

PMA performance goals apply
If
You have a pre-filing meeting with FDA.
And
Your application:
<ul style="list-style-type: none"> • fulfills the PMA content requirements of 21 CFR §814.20 • is acceptable for filing • addresses any key issues identified during any pre-PMA submission meetings • contains a complete manufacturing section
And
<ul style="list-style-type: none"> • contains a statement that the manufacturing facility is prepared for a GMP inspection.

All other submissions (e.g., 510(k)s, *de novos*, PDPs) qualifying for priority review are placed at the top of the review queue and evaluated in a manner consistent with the submitter's commitment to achieving FDA marketing authorization. The agency's performance in reviewing these submissions is assessed against the regular performance goals rather than the enhanced expedited PMA MDUFMA goals as stated in the Goals Letter (see below).

Contains Nonbinding Recommendations

As stated in the MDUFMA Goals Letter:

Cycle Goals for Expedited PMAs

The following cycle goals apply to: 70% of submissions received in fiscal year 2005; 80% of submissions received in fiscal year 2006; 90% of submissions received in fiscal year 2007:

- First action major deficiency letters will issue within 120 days
- All other first action letters (approval, approvable, approvable pending GMP inspection, not approvable, or denial) will issue within 170 days
- Second or later action major deficiency letters will issue within 100 days
- Amendments containing a complete response to major deficiency or not approvable letters will be acted on within 170 days.

Decision Goals for Expedited PMAs

The decision goals apply, as follows, to:

- 70% of submissions received in fiscal year 2005 will have an FDA decision in 300 days
- 80% of submissions received in fiscal year 2006 will have an FDA decision in 300 days
- 90% of submissions received in fiscal year 2007 will have an FDA decision in 300 days
- 90% of amendments containing a complete response to an approvable letter received in fiscal years 2003 through 2007 will be acted on within 30 days.

Contains Nonbinding Recommendations

Attachment 2 Suggested Timeframes for Discussing Expedited Review with FDA

Table 2. Suggested Timeframes for Discussing Expedited Review Status (shown in solid shading)

Criteria	Concept	Prototype	Pre-clinical	Clinical	Performance Assessment
1+ 2a					opportunities for discussion
1+ 2b	opportunities for discussion				
1+2c					opportunities for discussion
1+2d					opportunities for discussion

Pre-Submission Product Development Timeline

LEGEND FOR TABLE 2

Criteria for Expedited Review	
1.	Condition is life-threatening or irreversibly debilitating And
2.	the device addresses an unmet medical need, demonstrated by any one of the following:
	a. breakthrough technology
	b. no approved alternative
	c. significant clinically meaningful advantage
	d. in the best interest of patients.
Pre-Submission Product Development Timeline	
Phase	Primary Activity
Concept	Working up the abstract or generic idea
Prototype	Building first functional, full scale, preproduction model
Pre-clinical	Bench testing prototype and subsequent models
Clinical	Conducting human subject trials
Performance Assessment	Evaluating data from preclinical and clinical phases

Attachment 3 Expedited Review Form

Applicant: _____

Device: _____

Use/Indications: _____

Document #: _____

Justification for Expedited Review	Check if YES (✓)
1. Does the device affect a condition that is life-threatening or irreversibly debilitating?	<input type="checkbox"/>
2. Does the device address an unmet medical need, as demonstrated by any one of the following: ¹⁴	<input type="checkbox"/>
a. breakthrough technology	<input type="checkbox"/>
b. no approved alternative	<input type="checkbox"/>
c. significant clinically meaningful advantage	<input type="checkbox"/>
d. in the best interest of patients.	<input type="checkbox"/>
3. Are the answers to 1 & any one part of 2 YES?	<input type="checkbox"/>
If no, skip to 8.	
4. Is the submission an original PMA application?	<input type="checkbox"/>
If no, skip to 9.	

Original PMA Performance Goals Criteria

- | | |
|--|--------------------------|
| 5. a. Did the applicant attend a pre-filing review meeting with FDA? | <input type="checkbox"/> |
| b. Are the applicant's manufacturing facilities prepared for inspection (at the time the PMA was submitted)? | <input type="checkbox"/> |
| c. Is the original PMA substantively complete, as defined at the pre-filing review meeting? | <input type="checkbox"/> |
| 6. Are the answers to 5a, b & c all YES? | <input type="checkbox"/> |

If no, skip to 9.

Expedited Review Assessment (check only one)

- | | |
|--|--------------------------|
| 7. The original PMA qualifies for expedited review status and is subject to MDUFMA Performance Goals | <input type="checkbox"/> |
| 8. The submission does not qualify for expedited review status | <input type="checkbox"/> |
| 9. The submission qualifies for expedited review status, but it is not subject to MDUFMA Performance Goals | <input type="checkbox"/> |

Identify review team leader & members:

Attach tentative review timeline.

Signature:

Division Director

date

¹⁴ FDA will verify the applicability of any justification proposed.

Exhibit B

Guidance on PMA Interactive Procedures for Day-100 Meetings and Subsequent Deficiencies – for Use by CDRH and Industry

This document is intended to provide guidance. It represents the Agency's current thinking on the above. It does not create or confer any rights for or on any person and does not operate to bind FDA or the public. An alternative approach may be used if such approach satisfies the requirements of the applicable statute, regulations, or both.

PMA Staff, Office of Device Evaluation

Document issued on: February 19, 1998

Until May 26, 1998, comments and suggestions regarding this document should be submitted to Docket No. 98D-0079, Dockets Management Branch, Division of Management Systems and Policy, Office of Human Resources and Management Services, Food and Drug Administration, 12420 Parklawn Drive (HFA-305), Room 1-23, Rockville, MD 20857. Such comments will be considered when determining whether to amend the current guidance.

After May 26, 1998, comments and suggestions may be submitted at any time for Agency consideration to Kathy M. Poneleit or Lisa C. Fisher, 9200 Corporate Blvd, HFZ-402, Rockville, MD 20850. Comments may not be acted upon by the Agency until the document is next revised or updated. For questions regarding the use or interpretation of this guidance contact Kathy M. Poneleit or Lisa C. Fisher at 301-594-2186.

Additional Copies: World Wide Web/CDRH home page at <http://www.fda.gov/cdrh> or CDRH Facts on Demand at 1-800-899-0381 or 301-827-0111, specify number 322 when prompted for the document shelf number.

Guidance on PMA Interactive Procedures for Day-100 Meetings and Subsequent Deficiencies - for Use by CDRH and Industry

Background/Purpose

The FDA Modernization Act of 1997 (Pub. L. 105-115) added new section 515(d)(3) to the FD&C Act. This section requires FDA, upon written request, to meet with the applicant no later than 100 days after the receipt of a PMA application that has been filed. The purpose of the meeting is to discuss the review status of the application. With the concurrence of the applicant, a different schedule may be established. The section also states that, prior to the meeting, FDA is to inform the applicant in writing of any identified deficiencies and what information is required to correct those deficiencies. FDA must also promptly notify the applicant if it identifies additional deficiencies or any additional information required to complete agency review. This guidance¹ describes the procedures to be used to implement this interactive review provision. The guidance applies to original PMA applications received by FDA on or after February 19, 1998. While FDA will honor requests for review status meetings from applicants with pending submissions (i.e., PMA's submitted prior to February 19, 1998), the timing for such meetings will vary depending on the review status of the individual application.

The Meeting Request

The meeting request should be submitted with the PMA or as an amendment to the PMA no later than 70 days from FDA receipt of the PMA accepted for filing or 70 days from submission of the amendment making the PMA filable ("filing date"). This 30 day lead time is needed to allow FDA sufficient time to schedule the meeting. In the written request, the applicant should specify the type of meeting desired, e.g., face-to-face, teleconference, or videoconference, provide a list of the persons who will attend for the company, and identify several possible dates for the meeting. After a letter filing the application has been issued, the reviewing division will contact the applicant to set up the meeting if requested. As provided by the statute, FDA and the applicant may, by mutual consent, establish a different time for the "day 100" meeting.

Meeting Preparation and Documentation, Follow-Up

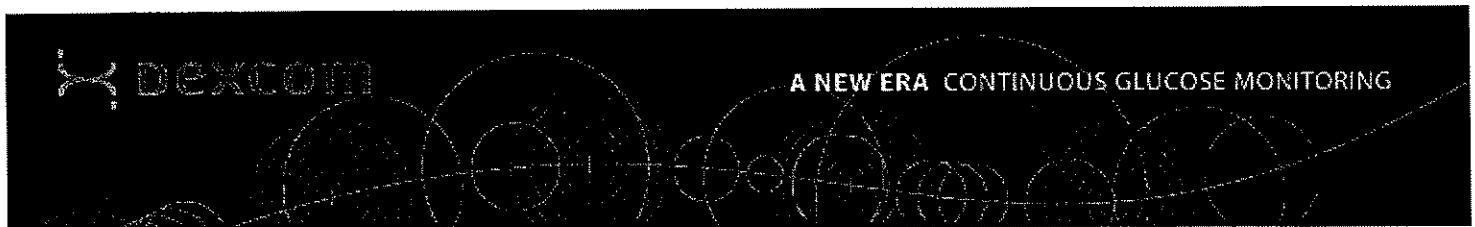
1. There will be identified to the applicant at the time of filing review a contact person on the review team who will ordinarily be the PMA project manager. The person will be responsible for coordinating the project, the interactive review meetings, and status reports.

¹ This document is intended to provide guidance. It represents the Agency's current thinking on the above. It does not create or confer any rights for or on any person and does not operate to bind FDA or the public. An alternative approach may be used if such approach satisfies the requirements of the applicable statute, regulations, or both.

2. FDA will provide the applicant with a written description of any deficiencies in the application that, at that point, have been identified based on an interim review of the entire application and will identify the information that is required to correct those deficiencies approximately 90 days from the filing date of the PMA. Minor deficiencies may be identified as well. This early communication will occur whether or not the applicant requests a day 100 meeting. The letter should be faxed to the applicant either by day 90 in the review cycle or at least 10 days prior to any day 100 meeting to facilitate a meaningful dialogue with the applicant.
3. The relevant core review team, Branch Chief, and Division Director or Deputy Director will attend the meeting with the applicant. Others attendees from FDA will include Program Operations Staff (POS) and Office management as appropriate.
4. During the meeting the following may occur:
 - a general discussion of identified issues and discussion of remedial actions,
 - a discussion of an action plan with estimated dates of completion,
 - a discussion of FDA estimated timetables for review completion,
 - identification of the need for panel involvement,
 - a discussion of possible premarket versus postmarket requirements.
5. Draft minutes of the meeting will be distributed to all attendees and the review team leader will provide the final minutes to the attendees, POS, and the administrative record.
6. After the day 100 meeting, FDA will continue to communicate promptly with the applicant via teleconference, fax, videoconference, etc., or in writing the status of the review and what if any additional information has been identified that is required to achieve completion of the review and final action on the application. This continued communication will occur at least every 4 weeks using any of the above methods until the review is completed. Minutes or copies of letters of all such interactions, including teleconferences and videoconferences, will be made a part of the administrative record.

Exhibit C

- [Home](#)
- [About DexCom](#)
 - [Overview](#)
 - [Management](#)
 - [Board of Directors](#)
 - [Careers](#)
- [Investors](#)
 - [Stock Info](#)
 - [Company News](#)
 - [SEC Filings](#)
 - [Webcasts](#)
 - [Printed Materials](#)
 - [EMail Alerts](#)
 - [Events Calendar](#)
- [Technology](#)
 - [Short Term Sensor](#)
 - [Long Term Sensor](#)
- [Resources](#)
 - [Diabetes Resources](#)
 - [Diabetes Overview](#)
- [Publications](#)
 - [Publications](#)
- [Contact Us](#)
 - [Contact Info](#)



News Releases

DexCom Achieves Clinical And Regulatory Milestones

Seven-Day Study Completed with Short-Term Sensor (STS) 100-Day Meeting with FDA for STS PMA Completed

San Diego, CA --- July 25, 2005 --- DexCom Inc. (NASDAQ:DXCM) today announced two clinical and regulatory milestones.

DexCom announced the completion of an 86-patient, 21-day trial in the United States with its Short-Term Continuous Glucose Monitoring System (STS) that evaluated performance over three consecutive seven-day periods. Patients inserted the STS sensors themselves, wore them in their daily activities at home and work, and were allowed to view and utilize the real-time continuous glucose data from the STS System. The study demonstrated that the STS System functioned reliably over a seven-day period without a decline in sensor performance or any signs of infection at the insertion site. Although the specific regulatory path and timing are not yet determined, the Company intends to seek FDA approval for a seven-day STS sensor, in addition to the three-day STS system currently under review. DexCom expects the data from this study to be presented or published by the study investigators in the future. "Since we filed our PMA for the three-day STS Continuous Glucose Monitoring System in March, we have continued to further develop the product platform and underlying technology," said Andy Rasdal, President and CEO of DexCom. "We have been able to leverage technology developed as part of our long-term implantable sensor program to the STS product platform and demonstrated with this latest study that our STS product functioned reliably for a seven-day period. While we continue to believe that our three-day STS system currently under review by the FDA could represent a significant breakthrough in the management of diabetes, we also believe a sensor that needs to be replaced only once per week would offer a new level of convenience in disease management to people with diabetes."

DexCom also announced that the Company had its 100-day meeting with the FDA in regard to its PMA application for the STS

Continuous Glucose Monitoring System currently under review by the FDA. The 100-day meeting is a regulatory meeting where the FDA reviews the status of the PMA application with the Company and typically makes requests for additional information. At this 100-day meeting, the FDA made requests of DexCom for additional analysis and information to support its STS PMA filing. In accordance with normal FDA procedures, the FDA will be outlining these requests in writing in what is called a major deficiency letter. DexCom considers all of the requests made at the meeting to be readily answerable and expects to provide the requested information in an expeditious manner. The FDA did not make any request for DexCom to conduct additional clinical studies. "Since May, when our STS PMA was accepted as filed and granted expedited review status, we have had an interactive and timely review with the FDA," said Andy Rasdal, President and CEO. We believe the 100-day meeting was very productive and continued to further the common understanding between DexCom and the FDA regarding our STS PMA application and continuous glucose monitoring."

About DexCom Inc.

DexCom Inc., headquartered in San Diego, California, is developing continuous glucose monitoring systems for people with diabetes.

Cautionary Statement Regarding Forward Looking Statements

This press release contains forward looking statements concerning our beliefs concerning our product development efforts and our expectations regarding FDA reviews that are subject to significant risks and uncertainties. Actual results could differ materially. The regulatory approval process for our continuous glucose monitoring systems involves, among other things, successfully completing clinical trials and obtaining a premarket approval, or PMA, from the FDA. The PMA process requires us to prove the safety and efficacy of our systems to the FDA's satisfaction. This process can be expensive and uncertain, and there is no guarantee that the PMA application we recently submitted for our three-day sensor, or any future submissions, will be approved by the FDA in any specific timeframe or at all. In addition, clinical testing of our products and eventual commercialization of our products are subject to all of the risks and uncertainties set forth in our registration statement filed with the Securities and Exchange Commission.

FOR MORE INFORMATION:

Steve Kemper
Chief Financial Officer
(858) 200-0200

©2005 DexCom. All rights reserved.

Exhibit D

- [Home](#)
- [About DexCom](#)
 - [Overview](#)
 - [Management](#)
 - [Board of Directors](#)
 - [Careers](#)
- [Investors](#)
 - [Stock Info](#)
 - [Company News](#)
 - [SEC Filings](#)
 - [Webcasts](#)
 - [Printed Materials](#)
 - [EMail Alerts](#)
 - [Events Calendar](#)
- [Technology](#)
 - [Short Term Sensor](#)
 - [Long Term Sensor](#)
- [Resources](#)
 - [Diabetes Resources](#)
 - [Diabetes Overview](#)
- [Publications](#)
 - [Publications](#)
- [Contact Us](#)
 - [Contact Info](#)



News Releases

DexCom Files Response To Support STS PMA Application

San Diego, CA --- September 12, 2005 --- DexCom, Inc. (NASDAQ:DXCM) today announced it has submitted the information requested by the FDA at the 100-day meeting for DexCom's PMA application for its Short-Term Continuous Glucose Monitoring System. DexCom filed its PMA for the STS Continuous Glucose Monitoring System in March, received expedited review status in May, had its 100-day meeting with the FDA in late July, and received the information requests arising from the 100-day meeting in a letter in late August. The Company believes the response just filed comprehensively addresses these FDA requests. Providing this response does not prevent the FDA from making further information requests nor does it guarantee approval of the STS Continuous Glucose Monitoring System.

About DexCom, Inc.

DexCom, Inc., headquartered in San Diego, California, is developing continuous glucose monitoring systems for people with diabetes.

Cautionary Statement Regarding Forward Looking Statements

This press release contains forward looking statements concerning our beliefs concerning our product development efforts and our expectations regarding FDA reviews that are subject to significant risks and uncertainties. Actual results could differ materially. The regulatory approval process for our continuous glucose monitoring systems involves, among other things, successfully completing clinical trials and obtaining a premarket approval, or PMA, from the FDA. The PMA process requires us to prove the safety and efficacy of our systems to the FDA's satisfaction. This process can be expensive and uncertain, and there is no guarantee that the PMA application we recently submitted for our three-day sensor, or any future submissions, will be approved by the FDA in any specific timeframe or at all. In addition, clinical testing of our products and eventual commercialization of our products are subject to all

DexCom || Investors

Page 2 of 2

of the risks and uncertainties set forth in our registration statement filed with the Securities and Exchange Commission.

FOR MORE INFORMATION:

Steve Kemper
Chief Financial Officer
(858) 200-0200

©2005 DexCom. All rights reserved.

Exhibit E

DexCom Presentation
William Blair 25th Annual Growth Stock Conference
Chicago, Illinois
June 23, 2005

Ben Andrew

I'm Ben Andrew, the Medical Technology Analyst with William Blair and Company and I'm pleased to be here today. We at Blair did co-manage an equity offering for DexCom earlier this year, and you can see the rest of our disclosures at Williamblair.com. Just a couple of quick comments from my perspective on the company. I've been looking at the glucose sensor/insulin pump market now since 1995 and there have been a lot of false starts there from the technology standpoint. When I came across this particular sensor technology, I got pretty excited when I saw the consistency and reliability of the data. And it really all does come back to the performance of the sensor. The pump market as Andy Rasdal will probably talk about is more of a maturing market that is being commoditized, so that's kind of the easy technology, if you will. This is the hard technology. And to the extent that this company seems to have put together a portfolio that can help address the steps towards a total artificial pancreas, if you will. I think this is a key, key technology and a company to get to know over time. So, I won't steal any more of Andy's thunder, but I'm very excited about the technology and leave it to Andy Rasdal to take us through it.

Andy Rasdal

Hello, Good Afternoon. I'm Andy Rasdal, President and CEO of DexCom. Thanks for coming today. Like Ben, we have our disclosures and make forward-looking statements that may not come true. I'm going to walk you through just a quick overview and then get into the clinical data, which is, I think, the heart and soul of what's important right now. We are solely focused on developing continuous pump glucose monitoring systems for people with diabetes. Continuous glucose monitoring has been one of the so called "holy grails" of the field of diabetes for some twenty years, and I think now we and a couple of other folks have matured the technology to where we believe we have something that's reliable and steady enough to help patients better manage their diabetes.

We're trying to establish DexCom early on as a pioneer and a leader in the field. We believe that continuous monitoring has the potential to become perhaps the largest piece in a standard of care down the road for the way people do monitor their blood glucose levels.

DexCom currently has two platforms under the development. The first on which the company was founded upon back in 1999, a fully and clampable long-term sensor. This is a miniaturized sensor about the size of a piece of Chicklets gum that is put underneath the skin in a short outpatient procedure—takes about fifteen minutes using a local anesthesia. Once in, it begins to continuously monitor glucose and relay that information to a wireless handheld device about the size of a cell phone. That is intended to last about a year. The other platform is the short-term patient insertable sensor. This is a sensor, a small wirelike sensor just larger than the size of a human hair that the patient actually inserts with a small gauge needle through their skin. Then it resides underneath the skin with a pod on top. It then begins to relay information to a wireless handheld in the same manner. And that is currently under review at the FDA. We filed our PMA in March. We're currently under review there and that device is intended to last for three days, then be peeled off basically like a bandage would and another one just put on its place on an ongoing basis.

As you all know, diabetes is perhaps now at epidemic state—one of the largest chronic diseases on planet earth. The diseases and complications associated with diabetes are significant costly. All of the complications associated with diabetes arise because people with diabetes are unable to maintain normal blood sugar levels. They go too high, or hyperglycemic or they go too low and go hypoglycemic. Today the real cost associated with the rise in the complications is associated with hyperglycemia. It's the number one cause of adult blindness, the number one cause of kidney failure, the number one cause of lower limb amputation. Someone with diabetes is five to ten times more likely to have an early cardiovascular event. So it's significant. That being said, the biggest obstacle that you'll hear clinicians say to date to improving the management of glucose level with current technologies is the fear of hypoglycemia or going too low. The only thing that can hurt you with diabetes acutely today is the risk of going too low blood sugar, losing unconsciousness, and perhaps crashing your car or some other type of event. Our goal, of course, is to allow people to maintain more normal blood sugar levels with continuous monitoring.

The glucose monitoring market is large, well established. That said, today it's estimated to be about a \$6 billion marketplace, making it one of the largest, if not the largest and fastest growing medical device marketplace today. Despite the sheer size of that, it has continued to provide double digit growth. We expect that to continue and especially with the advent of new technologies, see the market approaching almost \$9 billion by 2008. Today people with diabetes do monitor their blood glucose levels. And they way they do it is basically with a finger prick. They take a lance, they prick their finger, they squeeze out a drop of blood, they put it on a strip, they put it in the meter and it gives them a value. The benefits of more frequently monitoring have been clearly established historically by two very large-scale trials. These were both trials at DCCT and the UK PDS, both of which enrolled several thousand patients and followed them for almost a decade. What they found is that people who more intensively managed their diabetes and monitored more frequently statistically significantly reduced those complications such as blindness, cardiovascular disease, neuropathy and other things associated with the disease.

The problem is that today, it's not that people aren't motivated, but the technology has limitations. It's very inconvenient to be able to manage your disease that way. You've got to stop, take out a kit, prick your finger. Much has been made to do about the pain. I think the current finger stick market has addressed a lot of those question, and I think the real opportunity lies in convenience, and then finally providing more information to the patients. Today when you take a finger prick, for all that work you get a single value and it tells you that you're at 140. It doesn't tell you where you've been or where you may be heading. As we'll show you with some data that we and others have provided – knowing that trend is absolutely critical to improving care. This is actual data from one of our patients in our clinical trials with the long-term. This looks at a twenty-four hour period of a day in the life of someone with diabetes. This person actually is a well-controlled diabetic by all standards. He's an insulin pump user. He's [inaudible] the insulin pump. During this phase of the trial, we had the continuous monitor in him and were recording that, but we were not displaying it, and he was actually utilizing his finger sticks to manage his disease.

This sort of highlights . . . The day starts, the time zero is midnight and goes to midnight the following day. You can see the green area of the target range. This is the area of normal glycemia or the target recommended by the American Diabetes Association where people with

diabetes should maintain their blood glucose. Those red dots are the finger stick the patient has taken. For someone who takes four finger sticks, which is a pretty intensive monitor, you can see they get up in the morning about six a.m., take a finger stick, take one about noon, take one around dinner time and then probably one before they go to bed, and they adjust therapy. On the basis of those four finger sticks, if he could look back retrospectively, he'd figure it wasn't such a bad day, because two out of the four finger sticks were within the target range. So he concludes that fifty percent of the time he was in the range. The second would be that at lunch time, based upon where he was in the morning his glucose level is actually rising. The third conclusion is he figures out how to manage his disease the next day. So, although he went high, above 200 which isn't great, he never went higher than about 220. If you overlay the actual continuous data from our sensor which provides the equivalent of 288 finger sticks per day. From that you can see the picture is dramatically different, and all of those conclusions are faulty. You can see by the amount of time in the blue line, and certainly spending more than fifty percent of his time outside of the target range. You can see that at lunch he's actually not going up, but he's already had a high excursion, he's on the way coming down. In this case, the patient didn't do anything abnormal, but now you can see how people get into trouble with hypoglycemia, because hypoglycemia is nothing more than an elegant name for insulin overdose.

What happens is you need one dose of insulin to turn around an excursion if you're on your way up. If you're on your way down, and you've got momentum down, you deliver that same dose of insulin, it may drive you lower than you'd like to be, and then you start off this horrible cycle of reverberations. But then finally, you can see that he goes as high as 350 and he spends almost five hours in an excursion above 220 and has no way of knowing that. Perhaps the most difficult thing for patients is you certainly can't manage that which you don't know and so this is where continuous monitoring brings, for no more effort and probably actually less effort than taking four finger sticks per day, they're provided with this equivalent of 288 points per day plus all of the trend information. We've been working almost as long as anybody in the field of continuous glucose monitoring. We have what we believe is a very robust technology platform and a strong intellectual property platform. We have been aggressive in seeking patents. We have seven patents already issued in and around we believe are core enabling technologies in the field. We have over 52 patents currently pending. We've licensed nine patents exclusively which primarily relate to our long-term sensor as more of a defensive or a

blocking move. Then we have been aggressive making sure in other outside the U.S. markets that we file applications to protect. Again two platforms we've been working on. I'm going to walk real quickly through both of those and the status and the time with that.

Basically, both of the sensor platforms, either the long-term or the short-term, actually have technology which is specific for glucose. Because we've put it underneath the skin, very minimally invasively for sure in the short term, it's in contact with tissues and fluid that have glucose, so it measures exactly that. So, when the patient has this, it's actually recording data continuously analyzing their glucose levels. If they want to know what their glucose level is at this particular time, they simply push the button, and you can see on the display that little hand held device in the upper right hand corner, it actually gives them the level of their blood sugar level at that point and then it provides them with a one-hour trend. This particular trend is a great example. 140 is right at the upper range of euglycemia or the target zone. If you know you're at 140, it's ultimately a very difficult decision. If you're 140 and going up, then for sure, do something. Intervene, give yourself insulin, bring it down a little bit before you go too high and have one of these dangerous high excursions. If you're flat, well it's real simple, push the button ten or fifteen minutes later and see if there's been any change. Or, if you're in this case, you can see he's 140 but he's trending down toward the target range. In that case don't do anything; just check back. So that's how it enables. They can push the button again and get the same thing, but a three-hour trend. Push the button again and they get a nine-hour trend. The nine-hour trend has turned out to be very attractive for patients. Because, one of the limitations, any time you get excited about taking better care of yourself is what is the sort of feedback that you're getting better or you're getting worse. So at the end of the day, say through that lunch or waking up in the morning if you're worried about hypoglycemia, they push the button three times and they can see how they did over that whole period. They don't have to download to a computer. They get immediate feedback and they can adjust their lifestyle or therapy regime upon that basis.

Even though it's easy, we recognize that people get consumed in other activities, so the device also provides an alert to the patient, provides a little vibration and then a little beep that tells the patient that they're beginning to go high, before they actually go to one of these hyperglycemic or high excursions. And the same thing on the low side, before they would

become dangerously hypoglycemic or low, it provides them with an alarm that gives them the opportunity to intervene before they actually reach that state. So it's all . . . DexCom was the first company the FDA allowed to unblind this continuous data to patients and allow them to utilize it in a real time basis. We did that first study over three years ago. We've continued to run nearly all of our studies. We have several thousand days of unblinded real time use by patients that borders the magnitude above anybody else currently working in the field. So the display is well proven as a means to interact.

As I said, the company is founded around the concept of a fully implantable long-term sensor with the belief that nothing is more convenient for the patient to use. The implantable device that's implanted in a short outpatient procedure, once then it begins to heal and is able to process and manage glucose, then the patient doesn't have to do anything to manage that. They can't leave it in their drawer or on their shelf, in their car. It's with them and it's continuous. Without a doubt this is the most arduous technical challenge. Many people have tried to do this and have failed. We're clear leaders in this field. We're the only people who have continued to present successful human data on the long-time platform being committed to it. Today we don't have one hundred percent of our sensors working, one hundred percent of patients, one hundred percent of the time. I don't know that any medical device ever quite achieves that, but we're continuing to move the technology forward. With that we've moved rapidly towards miniaturization both to improve performance as well as to improve the implantability of the device. You can see the first generation device is about the size of a double A battery and the third generation device which we're currently implanting in some trials outside the U.S. is about the size of a piece of Chicklets gum. [Inaudible] much miniaturized.

As I said, we were the first company that the FDA allowed to unblind continuous data to patients. Other companies had and continue to run studies where the patients aren't allowed to see the data. Then they just do scientific or mathematical analysis on those to look at traditional single point accuracy metrics. We actually, after approving what I believe was an accurate device, went to the FDA and said, "Now we need to find out if patients can utilize this information to better manage their disease." This was presented to appear in the publication and then presented at the 2003 American Diabetes meeting. What it shows in the blue bars are the hours per day patients spent during our trial during which time they had the continuous glucose

monitor, but they weren't allowed to see it. So we ran the first sixty days in the trial, we implanted the device in it, it was collecting data, but the patients managed their disease based upon their normal finger stick and insulin pump therapies. Then in the second half of the study we unblinded patients and said, "Now utilize this information in the real time displays and trends." What we demonstrated for the first time in any study was that we showed that people could reduce the amount of time that they spent high statistically and significantly. So it reduced people on average spending seven or seven hours per day in the first sixty days above the 200 border and hyperglycemic range down to about five and half hours. That was statistically significant. Other studies have shown, like the DCCT, that if you reduce the highs, you reduce the complications. The trouble is, all of those trials showed a tripling of the incidence of hypoglycemia. And that's one thing patients and physicians always want to avoid. What was exciting about this data is that we showed a corresponding decrease in the amount of time people spent low. Then from our perspective and where the disease was most exciting we saw almost a doubling of the time spent in the euglycemic or the target range. Whereas moving all those people to the euglycemic or target range doesn't cure diabetes, it has the potential to significantly reduce or eliminate the complications associated with the disease. So this paper set really the standard for care.

The other platform that has come around for us has been the short-term sensor. This is a device again which the patient inserts and it resides under the skin and it's intended to be peeled off every three days and reimplanted. It turns out that the technology required to do this is not quite as difficult as what was to do the long term. We were able to leverage this very quickly. We had watched the development of the short term market for a number of years based on many [Inaudible] mounts which is a physician prescribed retrospective blinded to the patient type of device. It hadn't been all that exciting, but ever since some others began to push in the category and present exciting data, our clinical advisors suggested that perhaps since you could do it for the long term, you ought to try for the short term. It's only in April of last year we initiated a program. It turns out the technology is robust. We were able to get our first human studies done in the U.S. only four months after the initiation of the program on the bench we conducted a pivotal trial in January and filed a PMA in March, and we're currently under review.

So the way the technology works is it comes packaged like this to the patient. The patient basically peels off the adhesive on the back and puts it on their abdomen. They remove the safety tab, then they do something that they're very comfortable with—they simply give themselves an injection using a very small gauge needle that penetrates through the skin less than half an inch at a forty-five degree angle. Within that is embedded a tiny wire sensor. They pull that ring back which removes the needle and stores it sealed in that injector device leaving the sensor behind. They can snap that off. They now have a safe disposal for their sharps. They can just toss that away. They're left with a pod on the skin which they snap a small transmitter into. That's actually what resides on the skin. It's very small, very flat. You can see it deployed there. It's unobtrusive. Today almost everybody has preferred to put that on the abdomen. It could go to other places. It begins to immediately sense glucose and then it relays that to that small hand held device like we'd said.

We have again been working in the field very long and although the short-term program has come quickly forward with us for a year, we believe we have several competitive advantages. The first is we have the most stable and accurate sensor chemistry. Remember we really developed this platform to last up to a year in an implanted situation which means that we had to go longer and more stably and we leveraged that back to something which has to last a matter of days versus up to a year. We believe we have shown and will continue to show data that shows higher degrees of accuracy and stability over longer periods of time. The other is because we're really focused as implant people. We have focused on sensors. We know that sensor size and geometry has an effect on performance. We have the smallest, most flexible sensor. Our sensor is less than ten thousandths of an inch in diameter which is, we have two other potential competitors, Medtronic Minimed and Therasense Abbott. We are about one-third the size of both of those people in diameter which has two advantages. One is we have a smaller needle in order to deliver that with less pain. Perhaps more importantly, this is still something which has to reside through the skin and not be irritating and remain stable. If you've ever had a splinter, you know the potential for that. Because we're very small and very flexible, it's more comfortable and more effective. Then finally our pod which is something the patient has to wear on their skin is much smaller. We're about one-third the size of the Therasense device and one-tenth the size of the current Medtronic Minimed pod that they're required to wear.

We ran our pivotal trial, as I mentioned, in January. We completely finished the trial by early February. It was ninety-one patients, 287 sensors. We ran the study for nine days. Unlike previous studies run by other folks, this is where patients actually inserted the devices themselves. They were allowed to see the data. They wore it at home in normal, daily work activities. And it wasn't in a controlled hospital situation. Based upon . . . We looked at a number of measures. The trial was very successful, especially considering how quickly we moved through this. We met our primary safety and efficacy end points which is always helpful in trying to move the process through the FDA. There are people who have gotten approval by not meeting their primary scientific end points, but it requires a lot of hand waving. We had no serious or unexpected adverse events related to the insertion, wearing the rule of the device. More importantly for the actual utilization of the real time data, we met our efficacy end points highest at all levels. We demonstrated accuracy in all of the single point measurements. Perhaps most exciting, within a matter of just six days, we demonstrated statistically significant clinical benefit to patients who had the device versus those who didn't. And this was presented at the ADA this year to I think great acceptance. This shows the same sort of analysis for the long-term, but this is only over six days. We gave patients no instructions on how to manage their disease, simply gave them. We ran two different groups, a control group which had the device, but couldn't use it, and a study group which had it and could use it. There you see the difference and you show the green people who had access to continuous data in just a six day period showed a statistically significant reduction in highs and lows and once again in improvement towards euglycemia straight lined out over the sixty days like we ran with the long-term sensor with a promise for improvement there is very large. So we're the only company now that has submitted data showing safety and efficacy, showing good strong point single accuracy and having statistically significant clinical outcomes related to that.

We have new data which was published by one of our investigators at the ADA meeting in San Diego earlier this month. As we said, one of the barriers to more effective management is reduction of hypoglycemia as you more aggressively manage the highs. What this showed was that, based upon our system, we looked at 197 times when patients with the device actually went below 55, would be hypoglycemic. We looked at the mean number of alerts provided with a maximum of three. There's three opportunities in the system that alerts them before they go hypo. On average we had two point five (2.5) the mean time that the alert sounded before they

went hypo was almost an hour. Then 95% of all hypos were captured and alerted one way or the other. So it's potentially very significant. Clinicians are very excited about the potential to be more aggressively managing their patients to reduce their highs, because long-term complications without having to increase the risk of people going hypoglycemic.

In terms of the timeline for this. We filed our PMA, as I said, in March of this year. At the forty-five day mark we were notified by the FDA it had been accepted as filed. And we have been granted expedited review status with the device which is exciting for us. So we continue to move forward both in the regulatory process and beginning the preparations to have plant inspections, etc. You know, based upon kind of mean average times for PMAs we would expect that sometime around the second quarter of '06 to receive approval if they grant it to us for the first version of the device.

We've continued to work on the next generation of the device. This is my third medical device company, and the success in building a franchise is having a full pipeline. We are working on a second version of the short-term sensor to improve. Our belief would be that we would conduct the trials and have it ready to go for submission for PMA supplement the day after we get approval for our first PMA, and then have a product to launch six to eight months after that introduction of the first one.

In terms of the area which we're concentrating on for further development for the short term sensor platform, there's two. One is to extend the life beyond three days. The current pivotal study under review for PMA shows three days. What we know about that study was that all the sensors were triggering on day one. We're also working on day three just as well if not better than. And we have no irritations, infections of any kind at the wound site. So we have to believe that it can go longer and we're in the process now of doing some of those studies. But understanding whether it goes, you know, three and one-half days, five days, seven days, the ultimate goal would get to perhaps close to five to seven days. Because I believe that once every three days sensor like this dramatically improves the convenience of sick people with diabetes can manage their blood glucose levels. A once a week sensor I think is an absolute block buster, and we're moving towards that.

The other area is to completely eliminate the need for finger sticks altogether. We've been doing work on both the technical and the regulatory path. This is probably more of a regulatory development with the FDA in order to replace the current standard of care, finger sticks, with continuous monitoring. And we continue to move both forward. It is our intention to commercialize these devices ourselves. We are committed to building a business out of this. In order to do that you have to control the technology, and you have to control the customer. And the big reason for IPO is to allow us to scale this to manufacture the devices which we do almost entirely ourselves to date. And to be able again to, in advance of approval, hire a direct field force. Fortunately, although the market is very large, there's just about thirty-seven hundred endocrinologists that follow the, you know, old eighty-twenty percent. Twenty percent of them take care of eighty percent of the people that they see and they're heavily geographically concentrated at a place like the Barbara Davis Center in Denver that sees six thousand type 1 patients on a quarterly basis. So the opportunity for small, highly focused, educated, motivated field force to call and to inquire into this product is just ideal.

From the manufacturing side, we currently manufacture everything except the battery and the computer chip. Everything else we're vertically integrated and currently have manufacturing in the process, so we're scaling that. We have adequate facilities for initial commercial ramp. Perhaps most importantly, because one should never ignore the challenges of scaling for commercialization, my previous company was Arterial Vascular Engineering. And we scaled from the equivalent of about 100 stents per day to 2000 per day in a four month period—never had a single field action or interruption in supply. The same people who scaled me at AVE are the same people we brought aboard to scale us at DexCom. So it's an experienced group.

Perhaps one last word on the team. I think we've collected and attracted an extremely talented group of folks. Real quickly, prior to my doing DexCom I was president of Ventronic responsible for their vascular portfolio. I got there being one of the early people as the vice president of global marketing for Arterial Vascular Engineering. We took that public and as you may know sold that to Medtronic for \$4.3 billion. I stayed on for three years in that role. Andy Balo is our VP of clin-reg which is critical right now. Andy was formerly VP of clin-reg at St. Jude's some time ago. Andy is unique. Although he works on the industry side, he also has been asked to sit on four FDA advisory panels by the FDA. So he really understands the inside

workings of the FDA. Jim Brauker is considered one of the world's experts in biomaterials at Membrane Technology. Mark Brister was the ninth employee with myself at AVE. And he is really the guy who is responsible for taking the concept of something that we could build and implant in humans in scale. And Mark has been tasked with the management of the short-term sensor since its inception. I think we've got a strong group of outside board of directors. Don L. Lucas in the world of technology on the west coast; pretty well know Don because he founding chairman of Oracle Corporation. He still serves on the board there. A number of companies. A long history of helping people like myself to build valuable franchises down the road. Kim Blickenstaff, CEO with Biosite - I think is one of the most successful medical diagnostic stories. Kim was founder of that. Wouldn't just jump in for a year or two of success, he has fought that for over fifteen years. Terry Gregg we recently added to the board. You'll remember he was the president and COO at MiniMed up and through it's acquisition by Medtronic. Served on the research council for the American Diabetes Association as its chairman. Glen Nelson was vice chairman of Medtronic for twenty years. Glen and I worked together at Medtronic. Glen retired about the same time I left and he joined my board subsequently afterwards. Then Jay Skyler is a former president of the American Diabetes Association. I got to know Jay during our acquisition of MiniMed while I was at Medtronics. Jay was an early board member I asked to come forward by a man with that long history in Diabetes.

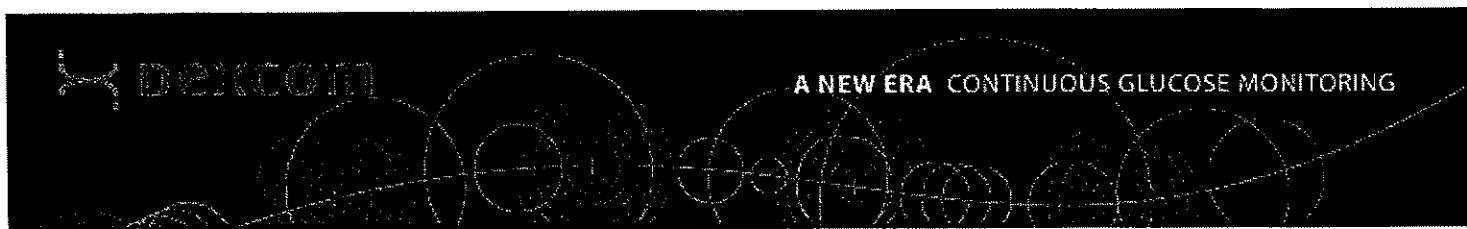
In terms of financials, we're at that little bit awkward stage. We did report first quarter, but it was before the IPO, so the next quarter will represent, I think, the capital structure and everything as it looks out there. But you can see that we basically lost about \$6 million in the first quarter of '05. You can see the investment over the number of years has been largely and dominantly in the area of R&D. There was actually a period of time when I came aboard, we actually began to reduce GNA and we felt that early, flat constant over there with really investing in the places that would add value, and that's in R&D at this point. We would expect as we go forward to see more on the sales and marketing. In line with that, the balance sheet at the end of '05 showed just over \$21 million in cash. It doesn't reflect the new capital structure and the conversion, of course, referred to as common or the proceeds. But we raised about \$52.5 million in the proceeds before expenses. Here, next month we'll be able to present the new ones.

So I think kind of where we are, in summary, this looks a kind of competitive overview of the monitoring—the glucose monitoring market. Today it's about \$6 billion. It's expected to grow based on monitoring technologies to about \$9 billion. Today all of that rests in the single point finger stick devices which have been under development for some twenty years without any real change. It's dominated by two large players—Roche and Johnson & Johnson. And then Abbot through acquisition of Medisense. And TheraSense has a play. Byron, BD all with less than ten percent market share. So we believe that the future, as do all clinicians, is in the field of continuous. Of those companies, there's really only three of us who can move forward to continuous. DexCom with both long and short-term platforms. Abbot through their acquisition of TheraSense has a short-term three-day insertable platform. And Medtronic through their CGMS and Guardian platforms as well. So we do think we're uniquely positioned in the area where the monitoring technology is most likely to grow based on technology and that's in continuous monitoring. Ultimately, as has been mentioned, the goal here would be to create a fully close-looped system in the future. I think that has substantial value. It is the sensor technology which will enable closing the loop of the pumps. There's nothing magic about pumps today. People can engineer them fairly quickly. What's been waiting for is a highly reliable front end sensor to be able to do that. It's our objective to establish our sensor as that sensor early on in the market. And to establish at a means by which patients can safely, effectively and economically manage their disease.

Thanks.

Exhibit F

- [Home](#)
- [About DexCom](#)
 - [Overview](#)
 - [Management](#)
 - [Board of Directors](#)
 - [Careers](#)
- [Investors](#)
 - [Stock Info](#)
 - [Company News](#)
 - [SEC Filings](#)
 - [Webcasts](#)
 - [Printed Materials](#)
 - [EMail Alerts](#)
 - [Events Calendar](#)
- [Technology](#)
 - [Short Term Sensor](#)
 - [Long Term Sensor](#)
- [Resources](#)
 - [Diabetes Resources](#)
 - [Diabetes Overview](#)
- [Publications](#)
 - [Publications](#)
- [Contact Us](#)
 - [Contact Info](#)



News Releases

Dexcom Successfully Completes FDA PMA Inspections

Quality System Regulation (QSR) and BIMO (Clinical) Inspections Successfully Completed

San Diego, CA --- August 2, 2005 --- DexCom Inc. (NASDAQ:DXCM) today announced the successful completion of two key inspections related to the FDA review of the PMA application for its Short-Term Continuous Glucose Monitoring System (STS™). DexCom filed its PMA for the STS™ system in March and was notified in May that the FDA had accepted the PMA as filed and granted it expedited review status.

DexCom announced that it had successfully completed the FDA pre-approval QSR inspection (previously known as a GMP or good manufacturing practices inspection) of DexCom's facility, manufacturing operations and quality systems. The FDA conducts a QSR inspection prior to PMA approval to evaluate the compliance of a company's quality systems and manufacturing operations with FDA regulations. A company must successfully complete a QSR inspection before its product can be approved for commercial distribution. By successfully completing this inspection, DexCom has demonstrated its compliance with federal regulations to manufacture and ship commercial product in the event FDA approval is received.

DexCom also announced that it has successfully completed the FDA pre-approval bioresearch and monitoring (BIMO) inspection at DexCom and at one clinical trial site for the clinical study filed in support of its PMA for the STS™ Continuous Glucose Monitoring System. The FDA conducts a BIMO inspection prior to product approval to ensure the integrity of the clinical trial and resulting data.

Both of these achievements represent significant milestones on the path to commercialization of DexCom's STSTM Continuous Glucose Monitor System, although they do not guarantee PMA approval and do not prevent the FDA from conducting further

inspections in the future.

"DexCom is committed to providing the highest quality products and fully complying with all regulations," said Andy Rasdal, President and CEO. "Successfully completing BIMO and QSR inspections is a very significant achievement for DexCom as we progress toward being a commercial enterprise capable of launching a product, especially as the inspections occurred earlier than we would have expected, only four months after filing our first-ever PMA. Since we filed our PMA application, we have continued to have a very interactive, timely and productive review process with the FDA."

About DexCom Inc.

DexCom Inc., headquartered in San Diego, California, is developing continuous glucose monitoring systems for people with diabetes.

Cautionary Statement Regarding Forward Looking Statements

This press release contains forward looking statements concerning our beliefs concerning our product development efforts and our expectations regarding FDA reviews that are subject to significant risks and uncertainties. Actual results could differ materially. The regulatory approval process for our continuous glucose monitoring systems involves, among other things, successfully completing clinical trials and obtaining a premarket approval, or PMA, from the FDA. The PMA process requires us to prove the safety and efficacy of our systems to the FDA's satisfaction. This process can be expensive and uncertain, and there is no guarantee that the PMA application we recently submitted for our three-day sensor, or any future submissions, will be approved by the FDA in any specific timeframe or at all. In addition, clinical testing of our products and eventual commercialization of our products are subject to all of the risks and uncertainties set forth in our registration statement filed with the Securities and Exchange Commission.

FOR MORE INFORMATION:

Steve Kemper
Chief Financial Officer
(858) 200-0200

©2005 DexCom. All rights reserved.